SAFETY PRECAUTIONS

BEFORE OPERATION

Do not smoke or use open flame in the area when servicing the batteries. Batteries generate hydrogen, a highly explosive gas.

When filling the fuel tank, provide a metal-to-metal contact between container, fuel tank and the auger.

When using the handcrank, keep the thumb on the same side of the crank handle as the fingers to avoid injury should the engine kick back. Never attempt to spin the engine with the handcrank.

DURING OPERATION

Stop all operation and shut off the engine before any services or adjustments are performed.

Be extremely careful when using a fire extinguisher. The fire extinguishing agent removes oxygen from the air and could cause suffocation.

If the engine is operated in a closed area, exhaust gases must be piped to the outside. Exhaust gases contain carbon monoxide, which is a colorless, odorless, and poisonous gas.

AFTER OPERATION

Do not remove the radiator cap from a hot engine until the engine has been shut down for five minutes to relieve pressure and avoid being burned.

Do not solder or weld the fuel tank before cleaning with steam or submersion in a caustic immersion tank and rinsing out and filling with water. Make sure all traces of gasoline are removed prior to repair.

Change
No. 2

HEADQUARTER
DEPARTMENT OF THE
Washington, D.C. *11 Ju*

Operator, Organizational, Direct and General Support, and Depot Maintenance Manual AUGER, EARTH; SKID MOUNTED; 9-FOOT BORING DEPTH (TEXOMA ENTERPRISES MODEL 254-10) FSN 3820-931-4509

TM 5-3820-236-15, 9 December 1968 is changed as follows:

Page 1-1. Paragraph 1-1 is superseded as follows:

1-1. Scope

This manual is for your use in operating and maintaining the earth auger.

Paragraph 1-2 is superseded as follows:

1-2. Maintenance Forms and Recor

a. Maintenance forms and records that required to use are explained in TM 38-750.

b. You can improve this manual by mending improvements, using DA For (Recommended Changes to Publication letter and mail direct to Commanding U. S. Army Mobility Equipment Co ATTN: AMSME-MPP, St. Louis, MO 63120

Page B-1. Appendix B is superseded as follo

APPENDIX B
BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED

Section I. INTRODUCTION

B-1. Scope

This appendix lists items required by the operator for operation of the earth auger.

B-2. General

This list is divided into the following sections:

b. Basic Issue Items List—Section II. Not applicable.

b. Items Troop Installed or Authorized List—

company the earth auger. These items a SUBJECT TO TURN-IN with the eart when evacuated.

B-3. Explanation of Columns

The following provides an explanation of in the tabular list of Basic Issue Items L tion II, and Items Troop Installed or Au Section III.

a. Source, Maintenance, and Recov

P Repair parts, special tools, and test equipment supplied from GSA/DSA or Army supply system and authorized for use at indicated maintenance levels.

P2 Repair parts, special tools, and test equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.

(2) *Maintenance code*, indicates the lowest level of maintenance authorized to install the listed item. The maintenance level code is:

Code	Explanation
C	Crew/Operator

(3) *Recoverability code*, indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are nonrecoverable. Recoverability codes are:

Code	Explanation
R	Applied to repair parts (assemblies and components), special tools, and test equipment which are considered economically reparable at direct and general support maintenance levels.
S	Repair parts, special tools, test equipment and assemblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (U/M). A 2 character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Furnished with Equipment (BIIL). Not applicable.

f. Quantity Authorized (Items Troop Installed or Authorized). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR code	(2) Federal stock number	(3) Description: Ref No. & Mfr code	(3) Description: Usable on code	(4) Unit of meas	(5) Qty auth
PC	7520-559-9618	CASE, Maintenance and Operational Manuals		EA	1
PC	2805-353-8901	CRANK, Hand		EA	1
PC	4210-565-6837	EXTINGUISHER, Fire		EA	1

By Order of the Secretary of the Army:

BRUCE PALMER, JR.
General, U. S. Army
Acting Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25B (qty rqr block no. 3861 Organizational Maintenance requirements for Earth Drilling Machine.

TECHNICAL MANUAL
NO. 5-3820-236-15

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *9 December 1968*

OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL

AUGER, EARTH: SKID MOUNTED, 9 FOOT BORING DEPTH (TEXOMA ENTERPRISES MODEL 254-10) FSN 3820-931-4509

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CHAPTER 1
INTRODUCTION

Section I. GENERAL

1–1. Scope

a. These instructions are published for the use of the personnel to whom Texoma Enterprises Earth Auger, Model 254–10, is issued. Chapter 1 through 4 provides information on the operation, preventive maintenance services, and organizational maintenance of the equipment, shipment and limited storage instructions and demolition to prevent enemy use. Chapter 5 provides information for direct and general support and depot maintenance. Also included are descriptions of main units and their functions in relationship to other components. Chapter 6 provides repair instructions.

b. Appendix A contains a list of publications applicable to the auger. Appendix B contains the Basic Issue Items list and the list of maintenance and operating supplies required for initial operation. Appendix C contains the Maintenance Allocation Chart.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceeding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

1–2. Forms and Records

a. DA Forms and records used for equipment maintenance will be only those prescribed in TM 38–750.

b. Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

Section II. DESCRIPTION AND DATA

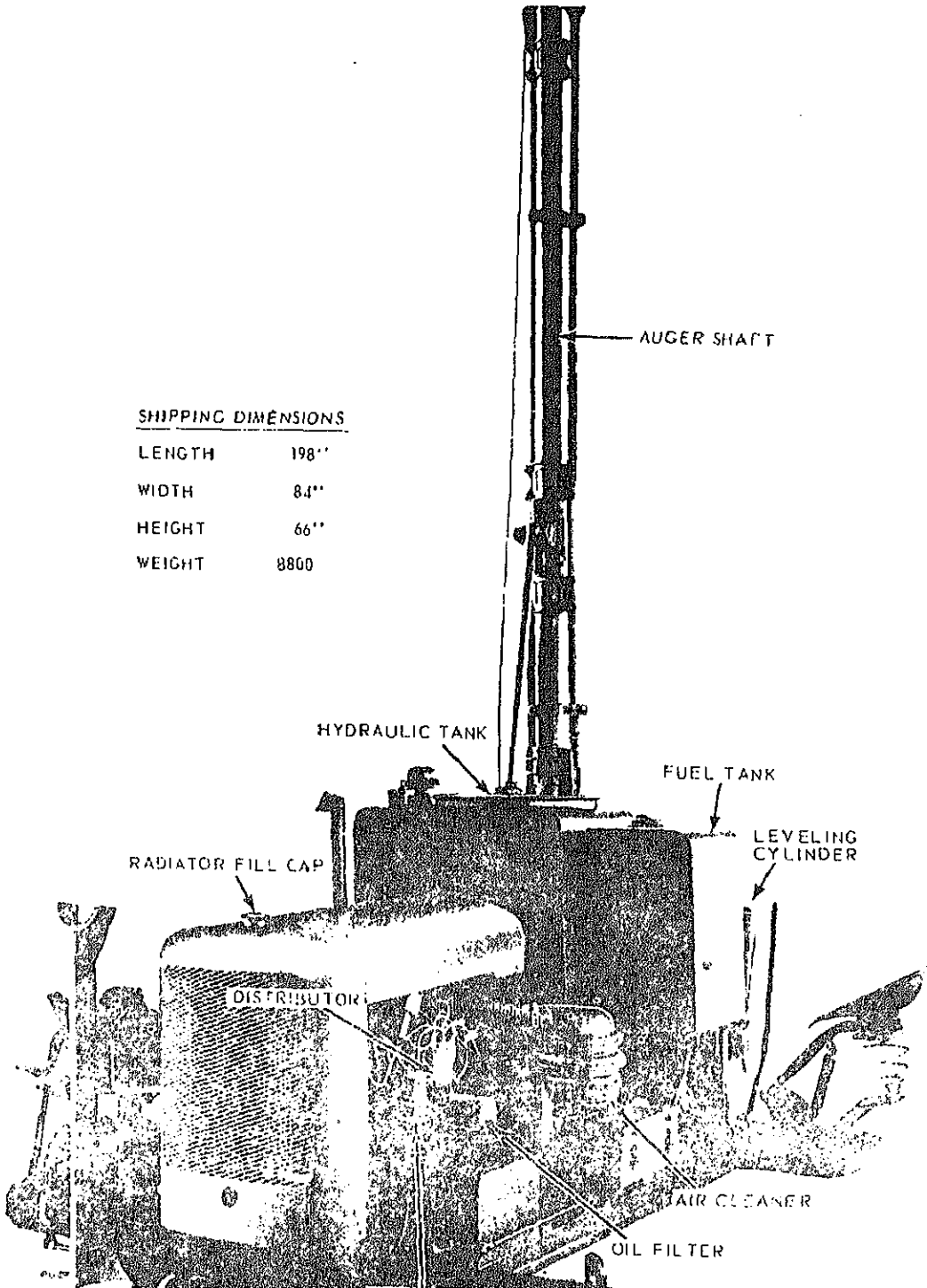
1–3. Description

a. General. The Texoma Enterprises Earth Auger, Texoma Model 254–10, illustrated on figure 1–1 and 1–2 is self-contained, skid mounted, earth boring assembly driven by a gasoline engine, Ford Model C5PF. All operations of the boring assembly are controlled by a hydraulic system. The auger is capable of boring holes 9 to 20 inches in diameter and to a depth of 9 feet. The boring assembly can be operated from vertical downward to 45°

The accessories consist of the variable speed governor, carburetor, fuel strainer, air cleaner, generator, starter, and voltage regulator. The oil filter is located on the left side of the engine next to the distributor.

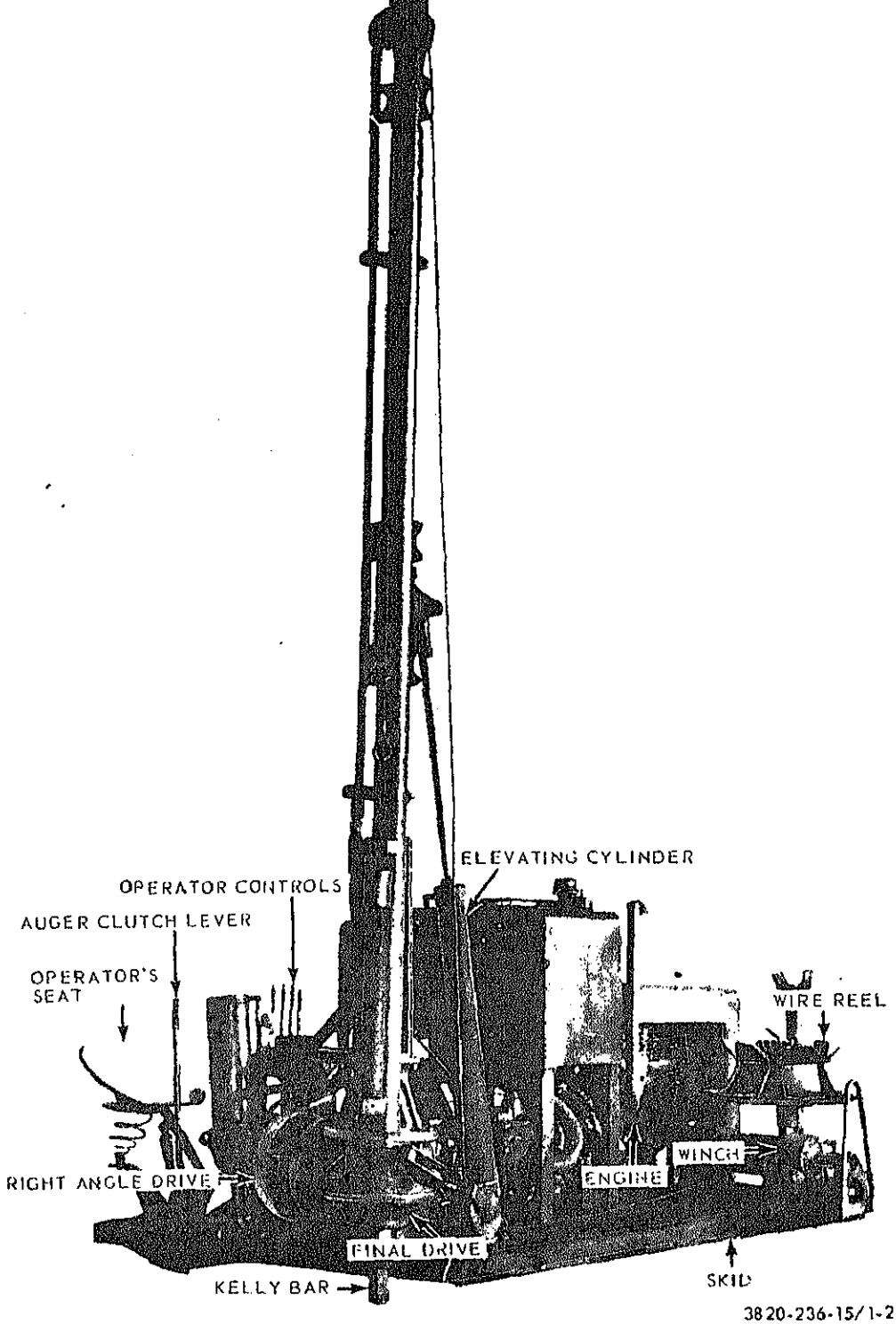
c. Transmission. The transmission has four speeds forward and one reverse. The transmission is a Ford Motor Company Model B6C 7001–A.

d. Auger Assembly. The auger assembly consists of the auger, figure 1–2, kelly bar, final drive assembly, and right angle drive as-



SHIPPING DIMENSIONS

LENGTH	198''
WIDTH	84''
HEIGHT	66''
WEIGHT	8800



3820-236-15/1-2

1-4. Identification and Tabulated Data

a. Identification. The earth auger has three identification plates.

(1) *Manufacturer's nameplate.* Mounted on the rear of the skid, specifies model number, capacity, FSN, auger serial number, engine serial number, and contractor number.

(2) Maintenance plate mounted on the rear of the skid gives model number and serial number, information concerning air cleaner, torque of packing nuts, and clutch adjustments.

(3) Engine identification plate mounted on the lower right-hand side of the engine also gives the serial number, type, and options.

b. Tabulated Data.

(1) *Auger assembly.*

Manufacturers	Texoma Enterprises, Incorporated
Model	254-10

(2) *Engine.*

Manufacturer	Ford Motor Company
Model	C5PF
Type	Gasoline
Number of cylinders	6
Cooling	Liquid
Electrical system	12 volts
Batteries required	1-(12 volts)
Ground	Negative

(3) *Oil Filter.*

Manufacturer	Rotunda Oil Filter
Model	R1-A
Type	Throw-away Element

(4) *Transmission.*

Manufacturer	Ford Motor Compan
Model	B6C 7001-A
Number of speed	4 forward, 1 reverse

(5) *Adjustments.*

Fan belt deflection	1/2 in. (inch)

(6) *Dimensions and weights.*

Overall length	198 in.
Overall width	84 in.
Overall height	66 in.
Shipping weight	8800 lb (pound)

(7) *Capacities.*

Fuel tank	16 gallons
Cooling system	16 quarts
Engine crankcase	6 quarts
Transmission	3 quarts
Right-angle drive	3 quarts
Final drive	3 1/2 quarts
Hydraulic system	63 gallons
Air cleaner	2/3 quart
Oil filter	1 quart

(8) *Performances.*

Diameter hole	Maximum depth
9 in.	9 ft. (foot)
12 in.	9 ft.
16 in.	9 ft.
20 in.	9 ft.
Drilling angle	Up to 45° (from ver

1-5. Difference in Models

This manual covers only the Texoma prises Earth Auger, Model 254-10. No differences exist for the model covered manual.

CHAPTER 2
INSTALLATION AND OPERATING INSTRUCTION

Section I. SERVICE UPON RECEIPT OF MATERIAL

2–1. Inspecting and Servicing the Earth Auger

Note. Make certain the earth auger is completely deprocessed before operating. Make sure preservations have been removed from the crankcase and fuel tank.

a. Perform the preventive maintenance services listed in the preventive maintenance checks and services (table 3–1).

b. Make a complete visual inspection to see that the required tools, repair parts, publications, accessories, and attachments are with the earth auger and in serviceable condition.

c. Visually inspect the earth auger for loss of parts or damage which may have occurred during loading, shipping, or unloading.

d. Report all damage and deficiencies to direct support maintenance.

2–2. Installation or Setting-Up Instructions

a. General. The auger is mounted on a carrier with a flat body of suitable size. Setting-up consists of positioning the carrier so that the earth auger can bore holes where desired, installation of augers, servicing battery, removing auxiliary plug from inside hydrauli tank and installing suction adapter, and low ering the support jacks to the ground wher necessary.

b. Battery Service. Service the battery as in structed in figure 2–1.

c. Hydraulic Tank Service (fig. 2–2). Clea strainer and breather. Check "O" rings an gasket. Replace if necessary.

d. Support Jacks. Two telescoping suppor jacks are mounted under the rear corners o the carrier body. The jacks are carried swun up towards the center of the carrier when no in use. When operating the auger in hardpa or rocky soil, which would cause the auger t bounce, the jacks must be lowered. The jack must also be lowered when operating in thick clay or mud-like texture, which would caus suction when removing the auger from th holes. Lower the jacks to the ground wheneve necessary as instructed in figure 2–3.

e. Auger, Bits and Points. Install the bi and point on the auger and the auger on th kelly bar as shown on figure 2–4.

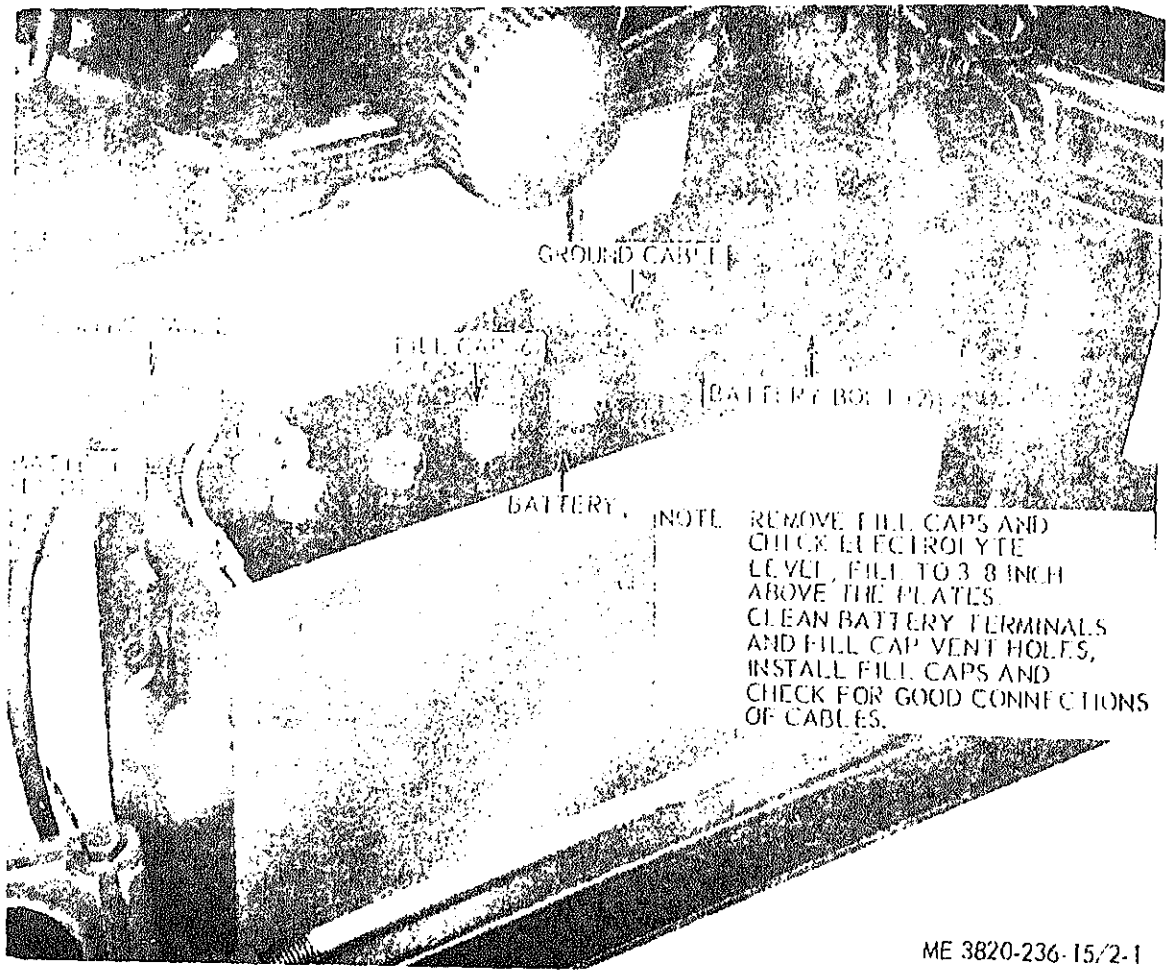
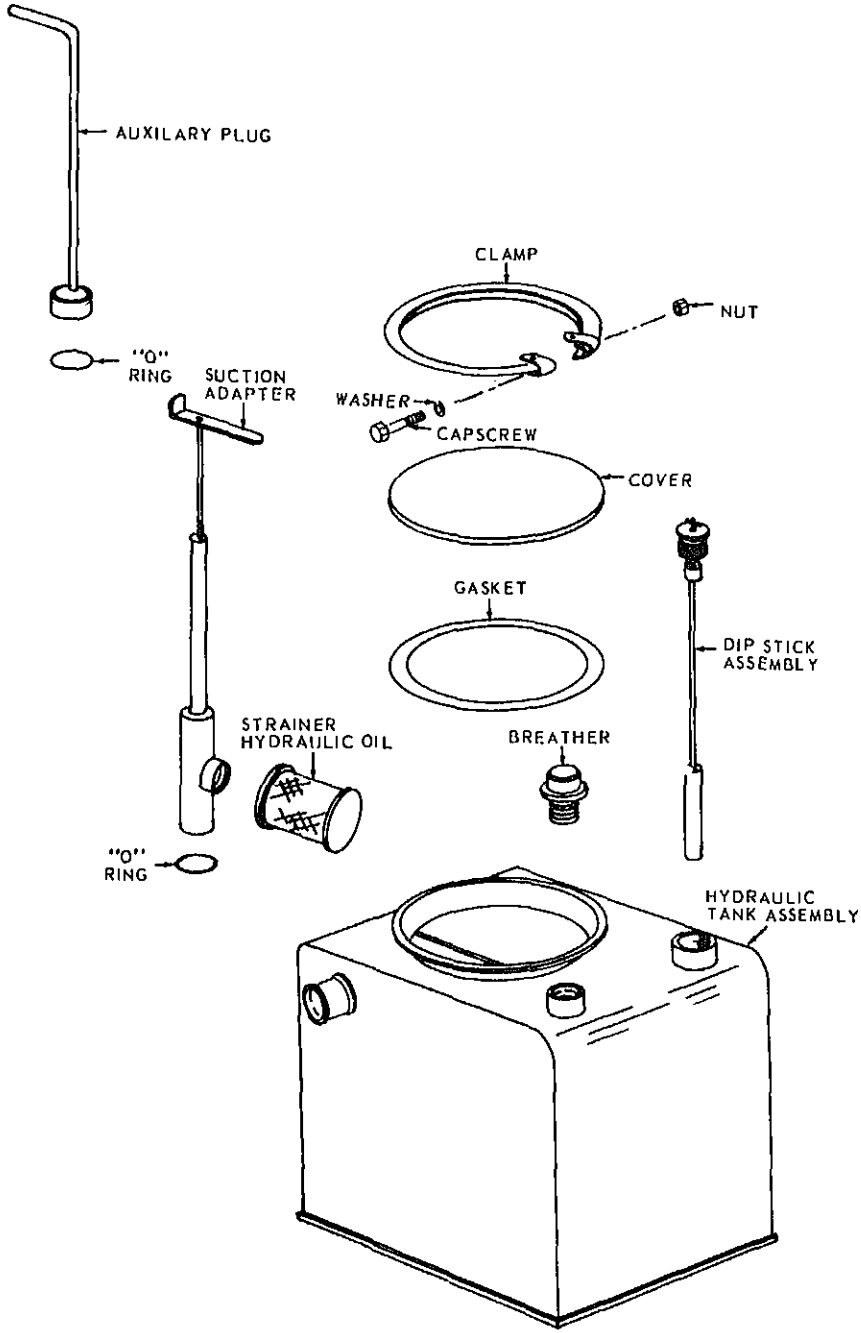


Figure 2-1. Battery service.



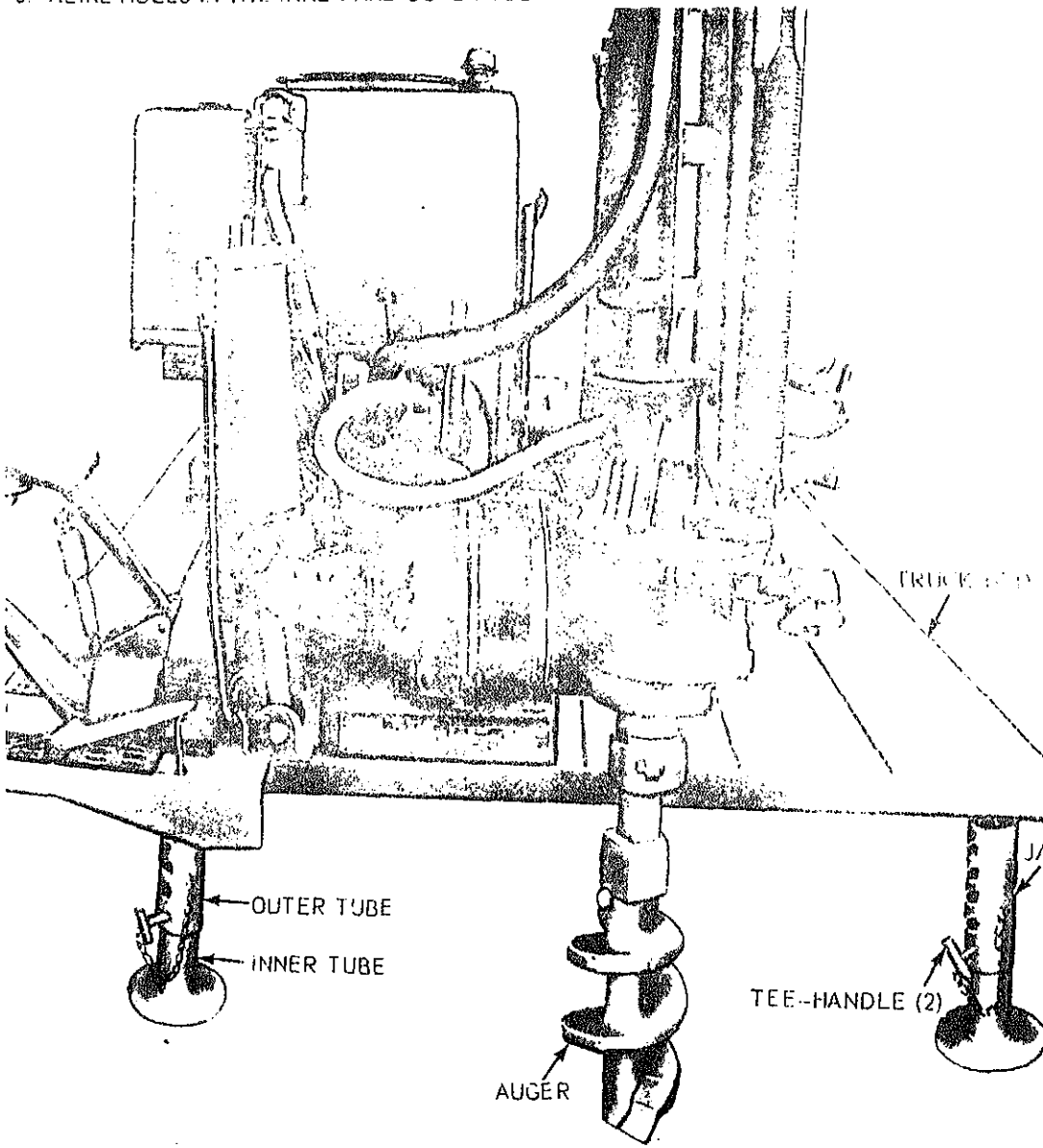
NOTE: 1. REMOVE CAPSCREW, NUT, AND CLAMP FROM TOP OF HYDRAULIC TANK.

2. *REMOVE COVER.*

3. LIFT AUXILARY PLUG, LOCATED INSIDE TANK, FROM HYDRAULIC TANK OUTLET.

4. INSTALL SUCTION ADAPTER PLUG.

1. DISCONNECT CARRYING CHAIN FROM JACK AND ALLOW JACK TO SWING DOWN.
2. PULL TEE-HANDLE FROM HOLES AND LOWER INNER TUBE TO DESIRED POSITION.
3. ALINE HOLES IN THE INNER AND OUTER TUBES AND INSTALL TEE-HANDLES.



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–3. Preparation for Movement

repare the earth auger for movement as fol-
ws:

a. Clean and remove the auger from the
elly bar in reverse of the instructions on fig-
re 2–4.

b. Shorten or raise the jack support by:

(1) Disconnect carrying chain from jack
nd allow jack to swing down.

(2) Pull tee-handle from holes and lower
ner tube to desired position.

(3) Aline holes in inner and outer tubes and install tee-handles.

c. Lower the auger shaft onto the carrier bracket in reverse of the instructions in figure 2–7.

2–4. Movement by Carrier

The earth auger may be readily moved as it is normally mounted on a carrier. If it has been removed from the carrier, it can be shipped by rail for long movements. Report to organizational maintenance for help in locating and securing the earth auger.

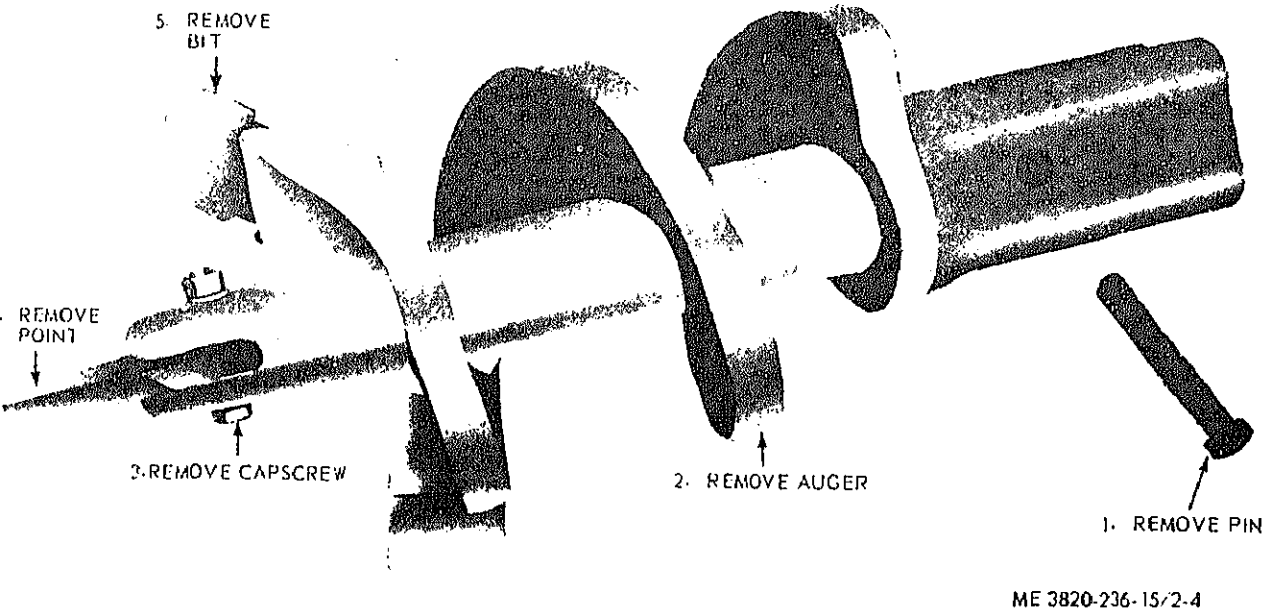

Figure 2–4. Auger, bit, and point.

Section III. CONTROLS AND INSTRUMENTS

2-5. General

This section describes, locates, illustrates, and furnishes the operator or crew sufficient information about the various controls and instruments for proper operation of the earth auger.

2-6. Controls and Instruments

The purpose, location, and use of the cont
and normal readings of the instruments
gages are illustrated on figure 2-5.

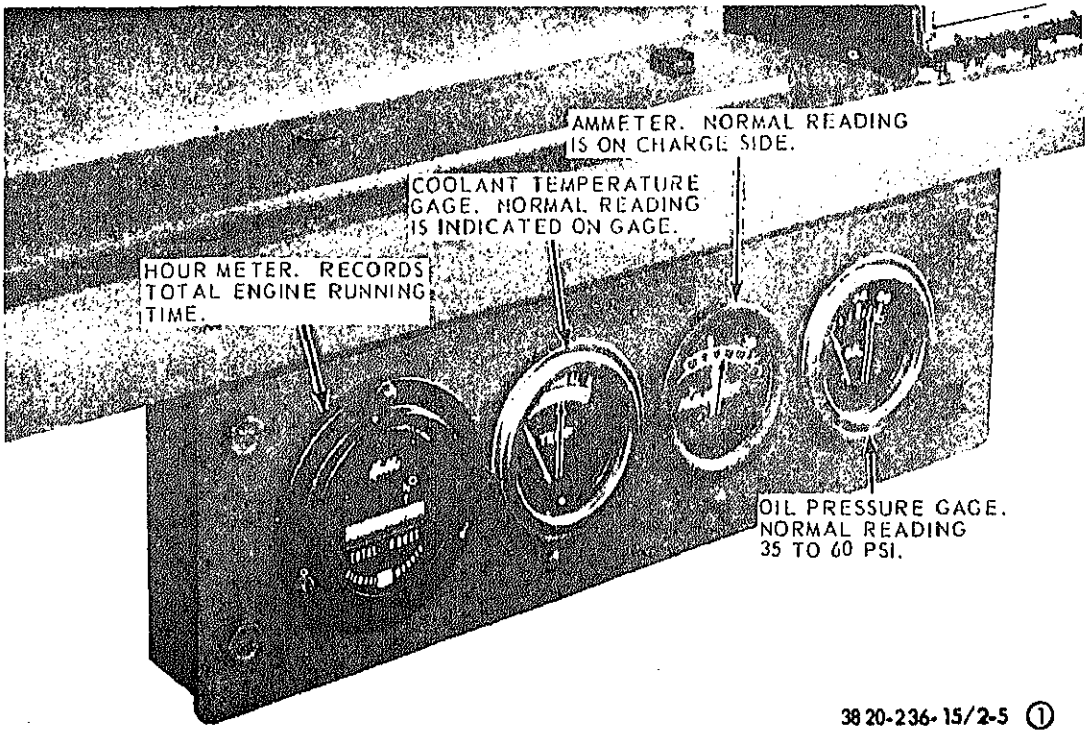

Figure 2-5 (1). Controls and instruments.

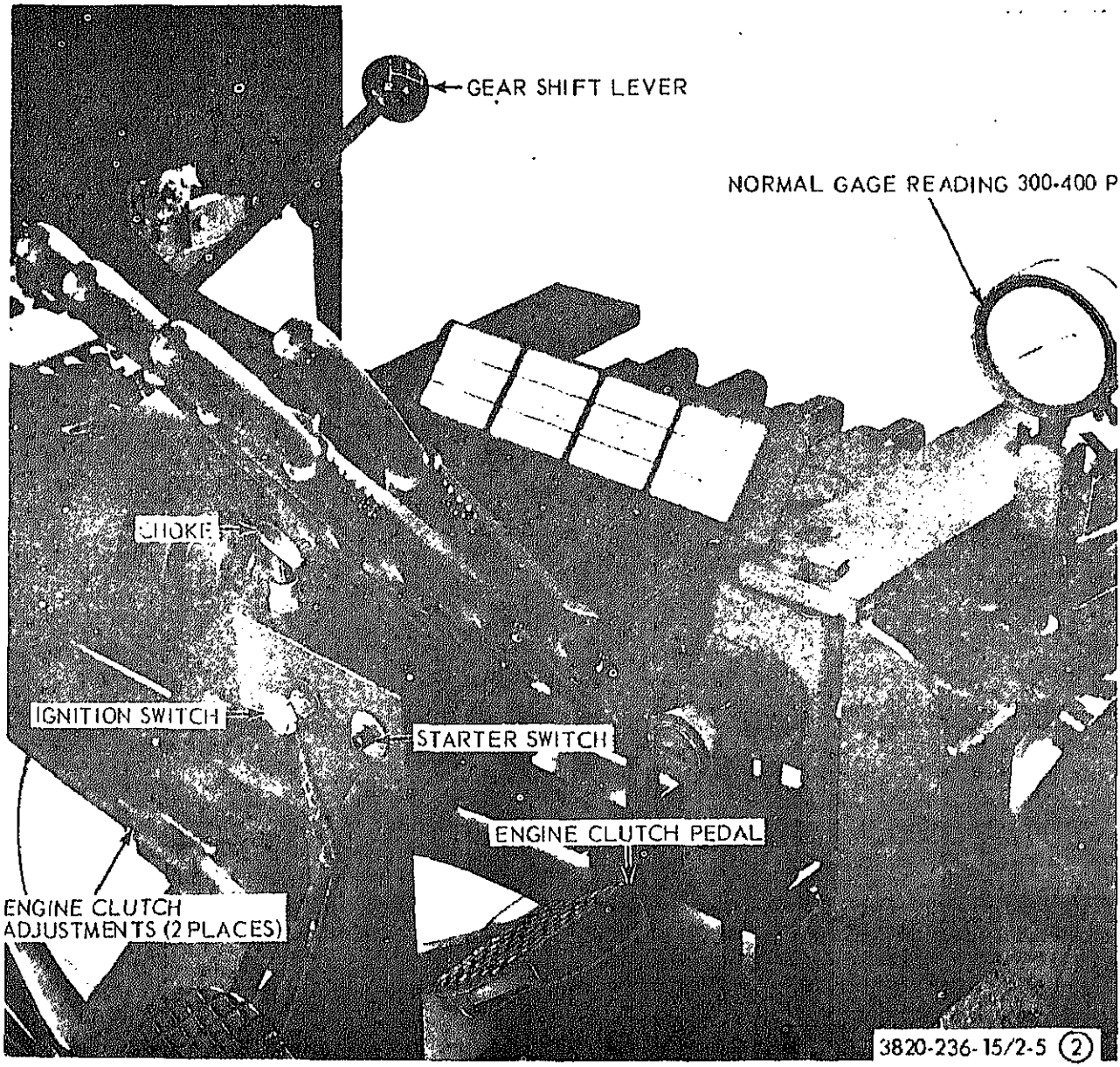

Figure 2–5 (2)—Continued.

2–7. General

a. The instructions in this section are published for the information and guidance of the personnel responsible for the operation of the earth auger.

b. The operator must know how to perform every operation of which the earth auger is capable. This section gives instructions on starting, stopping, and operating the earth auger. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit the individual job.

2–8. Starting the Earth Auger Engine

a. Preparation for Starting.

(1) Perform the preventive maintenance service.

(2) Place all controls in neutral position.

b. Electrical Starting (fig. 2-5(2)).

(1) Pull ignition switch.

(2) Pull the choke out about half way. If engine is cold pull choke out all the way.

(3) Push the starter button.

(4) Allow engine to warm up for seven to ten minutes before engaging the load.

c. Manual Starting. The manual starting will be performed in the same manner as the electrical starting, except the handcrank will be used instead of the starter switch.

Warning: **When using the handcrank keep the thumb on the same side of the crank handle as the fingers to avoid injury should the engine kick back. Never attempt to spin the engine with the handcrank.**

2–9. Stopping the Earth Auger Engine

a. Place all controls in neutral position.

b. Stop the earth auger engine.

(1) Lower the engine speed to idle.

(2) Turn off the ignition switch. If the engine has been running hot, let it run at fast idle speed a few minutes to dissipate the excess heat.

strainer beneath fuel tank assembly.

2–10. Operation of Equipment

a. General. The auger is designed for use in boring holes in the earth for construction purposes such as fence, power line, anchor post holes, or for explosives. The auger at full speed in fourth gear will rotate at not less than 150 rpm and in low gear not more than 40 rpm. The auger valve levers are placed so that the operator may be seated at the left rear of the unit. From this position the operator can observe the boring operations and the engine instruments at the same time. All operations of the earth auger can be performed from the operators seat.

b. Auger Gear Warming Operation.

(1) Start the engine (para 2–8).

(2) Engage the engine clutch and run engine at idle speed.

Note. Do not attempt to shift the transmission without first disengaging the engine clutch.

(3) Engage the auger clutch by pulling back the auger clutch lever (fig. 2–6) and allow auger shaft to rotate five minutes.

Note. Do not run the engine faster than idle until the auger gears are thoroughly warmed up.

(4) Disengage the auger clutch and engine clutch, and shift transmission to neutral.

(5) Stop engine (para 2–9).

c. Auger Shaft Elevating Operation.

(1) Start engine (para 2–8).

(2) Elevate the auger shaft as in figure 2–7. Pull the control valve handle to raise auger shaft. Push the control valve handle to lower the auger shaft.

d. Leveling Operation. Level the auger as instructed in figure 2–8. The leveling cylinder positions the bar assembly vertically from left to right. Push the control valve handle to go right, pull for left.

e. Boring Operations. Perform the operation as shown in figure 2-9(1) and 2–9(2).

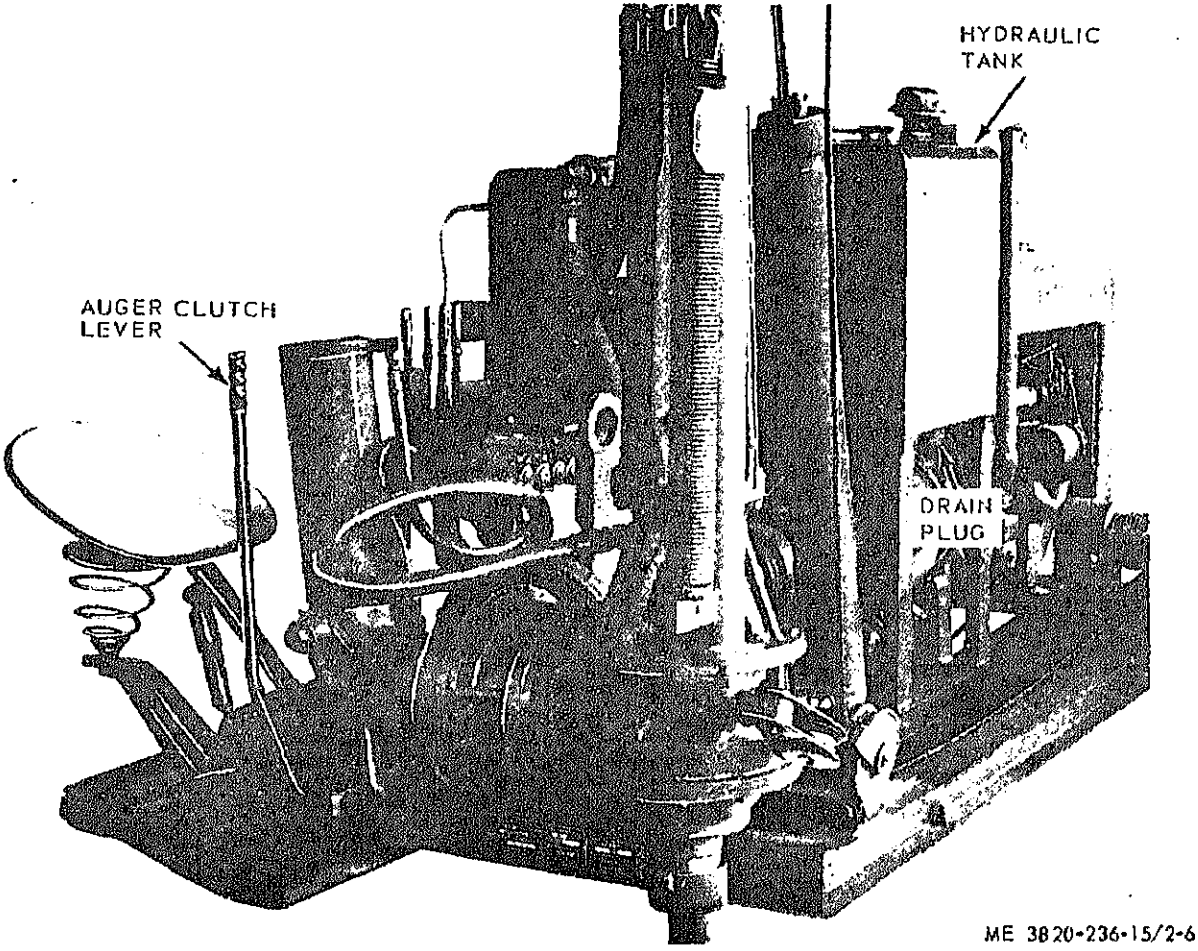

Figure 2-6. Auger clutch lever and hydraulic tank.

ELEVATING.

PULL THE ELEVATING CYLINDER HANDLE TO ELEVATE THE AUGER SHAFT TO THE VERTICAL POSITION. IF THE AUGER SHAFT DOES NOT RAISE IMMEDIATELY, INCREASE PRESSURE ON THROTTLE TREADLE TO INCREASE ENGINE SPEED AND RAISE HYDRAULIC PRESSURE. OPERATE THE ELEVATING CYLINDER HANDLE UNTIL THE AUGER SHAFT IS PLUMB AS INDICATED BY THE ELEVATING SPIRIT LEVEL. PUSH ON THE ELEVATING CYLINDER HANDLE TO LOWER THE AUGER SHAFT TO THE DOWN POSITION.

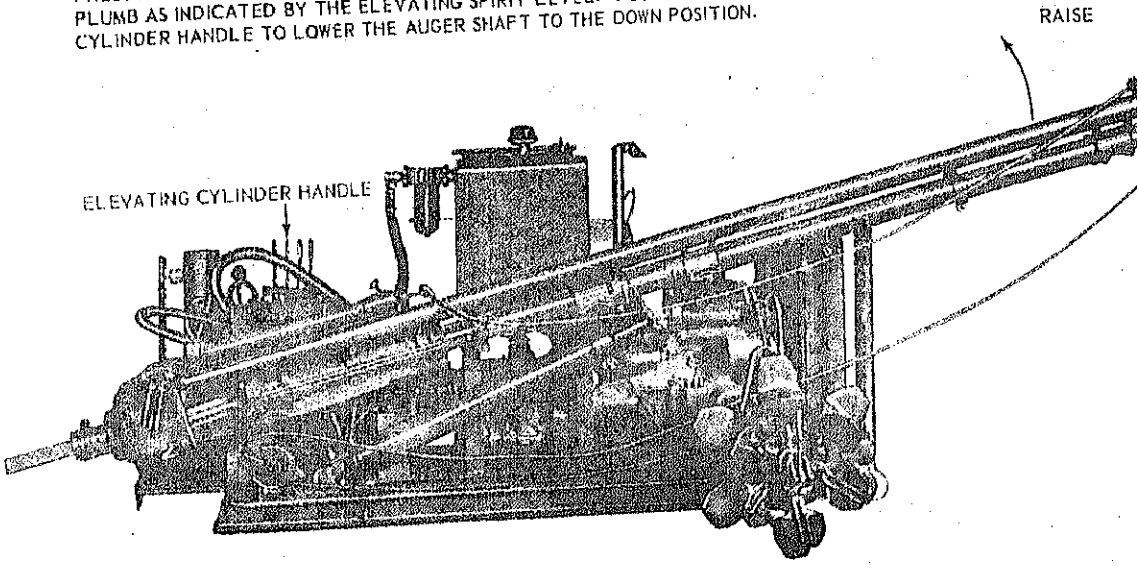

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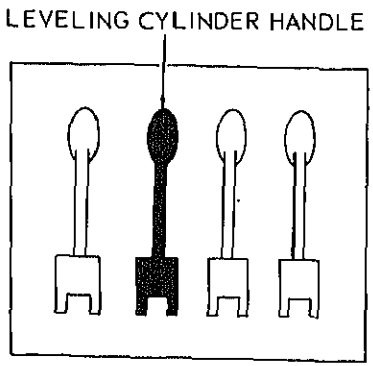
Figure 2–7. Auger elevating instructions.

LEVELING - (RIGHT ANGLE)

PUSH ON LEVELING CYLINDER HANDLE TO TILT AUGER SHAFT TO RIGHT. RELEASE HANDLE WHEN AUGER SHAFT IS PLUMB AS INDICATED BY LEVELING SPIRIT LEVEL.

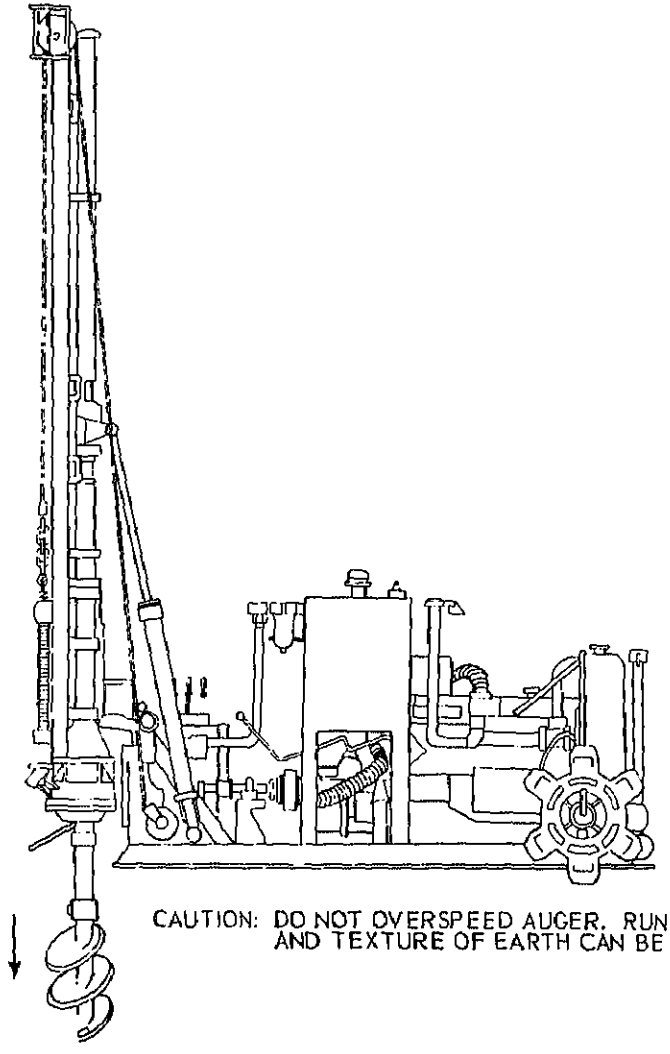
PULL ON LEVELING CYLINDER HANDLE TO TILT AUGER SHAFT TO LEFT.

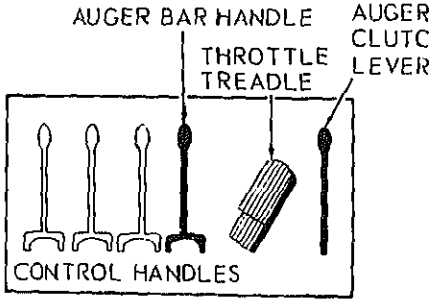


CONTROL HANDLES

DRILLING

ENGAGE AUGER CLUTCH BY PULLING BACK ON AUGER CLUTCH LEVER, PRESS DOWN ON THROTTLE TREADLE TO INCREASE ENGINE SPEED AND PUSH AUGER BAR HANDLE FORWARD TO LOWER AUGER INTO EARTH.



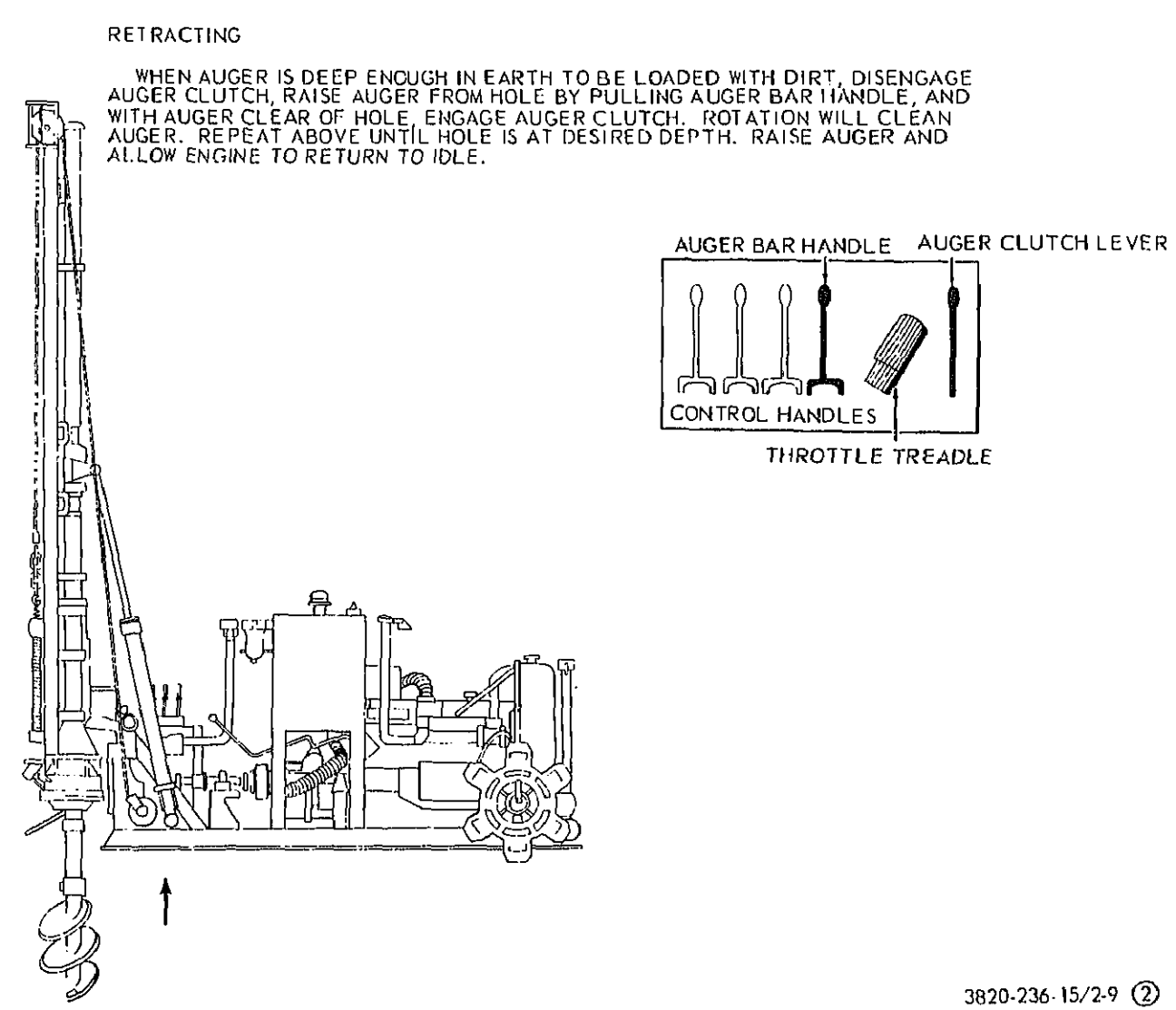


CAUTION: DO NOT OVERSPEED AUGER. RUN ENGINE AT SLOW SPEED UNTIL TYPE AND TEXTURE OF EARTH CAN BE DETERMINED.

3820-236-15/2-9 (1)

A. DRILLING

Figure 2-9(1). Boring operation instructions.



B. RETRACTING

Figure 2-9(2)—Continued.

Section V. OPERATION UNDER UNUSUAL CONDITIONS

2–11. Operation in Extreme Cold (below 0° F)

a. See that antifreeze has been checked and is correct for the lowest possible temperature expected (TB ORD 651).

b. Inspect the cooling system and report

d. Keep fuel tanks full at all times to pre vent condensation.

e. Drain and service fuel strainers frequent ly.

f. During warm up allow engine to reac normal operating temperatures before apply

Clean and flush the cooling system at frequent intervals.

(2) Make sure the fan belts are in good condition and that the tension is adjusted properly and that the thermostat is in proper working condition.

(3) Clean between the fins of the radiator core frequently to get the best possible cooling. Use compressed air if available to blow all dust and dirt out of the core. Avoid using water that contains substances likely to cause excessive scale and rust.

b. Lubrication System. Lubricate the unit for hot weather operation in accordance with figure 3-1(1) and 3-1(2).

c. Fuel System.

(1) Clean the gasoline strainer frequently and check the fuel filters.

(2) Check the air cleaner. Keep it clean and free from foreign matter.

(3) Be sure the tank vents in the fuel system are open.

d. Electrical System. Check the electrolyte level in the battery daily, and fill to three-eighths inch above the plates with distilled water, if available. Clean mineral free water may be used.

13. Operation in Dusty or Sandy Areas

a. Cooling System.

(1) Keep the radiator core free of dust, sand, or foreign matter to avoid overheating of the engine.

(2) Keep dust and sand from entering the radiator by wiping dust or sand from the cap before adding coolant.

b. Lubrication System.

(1) Lubricate the unit in accordance with the current lubrication order.

(2) Keep all lubrication points clean and avoid spilling oil on the unit as it will collect dust and sand.

(3) Clean and replace filters more often than in normal operation.

c. Fuel System.

(1) Take all precautions necessary to

necessary.

d. Electrical System.

(1) Service the batteries frequently and keep battery box covers securely fastened.

(2) If any of the instrument gages have loose-fitting glass, use a sealer or tape to keep dust or sand from entering.

2–14. Operation Under Rainy or Humid Conditions

a. Lubrication System.

(1) Lubricate the unit in accordance with the current lubrication order.

(2) Keep the filler caps and plugs tight to prevent water from entering the lubrication system.

b. Fuel System.

(1) Keep the fuel tanks full to avoid condensation of moisture, and keep fill caps tight.

(2) Inspect gasoline strainer for accumulated water more often than is required during normal operation.

c. Electrical System.

(1) Check wiring for cracked or frayed insulation. See that wiring is kept dry and waterproofed.

(2) Coat the battery terminals with grease, and keep the battery box secured.

2–15. Operation in Salt Water Areas

a. Lubrication System.

(1) Keep oil filler caps and plugs tight.

(2) Be sure to clean and dry all fittings before lubricating.

b. Cooling System. Be sure the water in the cooling system is free from salt or alkali. Use an approved rust inhibitor to prevent the formation of rust or scale in the cooling system.

Caution: **The cooling system is not intended for use with salt water. However, salt water may be used in extreme emergencies. Drain, flush and refill the cooling system as soon as possible after having used this expe-**

c. Electrical System.

(1) Clean electrical connections and keep em dry.

(2) Coat the battery terminals with grease id secure battery box cover.

d. Protection.

(1) Wash the unit frequently with clean, esh water.

(2) Removc corrosion from any unpainted rface. Report areas in need of painting to rganizational maintenance.

-16. Operation at High Altitudes

a. The engine in this unit is designed to perate under normal conditions up to 5,000 eet above sea level without special service or djustment.

b. Above 5,000 feet the engine efficiency will be reduced. This is a normal condition which cannot be prevented, but maximum performance can be maintained by following all service instructions carefully. Be sure air cleaners are clean and free of objects that might restrict flow of air to the unit.

c. Be alert for pressure leaks that allow the coolant to boil with resulting loss of coolant. Inspect the radiator cap and gasket frequently for tight sealing.

2-17. Fire Extinguisher

a. Description. The fire extinguisher is suitable for electrical fires because it will not damage electrical equipment or conduct electricity.

b. Operation. Remove fire extinguisher from its location; pull the pin, and squeeze the lever. Direct the foam at the base of the flame.

Warning: **Be extremely careful when using a fire extinguisher in an enclosed area. Provide adequate ventilation before entering an enclosed area where the extinguisher has been used.**

c. Maintenance. For maintenance of the fire extinguisher refer to TB 5-4200-200-10 and TM 5-687.

OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. OPERATOR'S AND ORGANIZATIONAL MAINTENANCE TOOLS AND EQUIPMENT

3–1. Tools and Equipment

Tools and equipment issued with or authorized for the earth auger are listed in the Basic Issue Items List, appendix B. No special tools or equipment are required by the operator or organizational maintenance personnel for maintenance of the earth auger.

3–2. Organizational Maintenance Repair Parts

Organizational maintenance repair parts listed and illustrated in TM 5–3820–236-

Section II. LUBRICATION

3–3. General Lubrication Information

The lubrication order shown in figure 3–1 is an exact copy of the lubrication order for the earth auger. For the current lubrication order, refer to DA Pamphlet 310–4.

3–4. Detailed Lubrication Information

a. General. Replace covers on lubrication containers after use and store in a clean, dry place. Keep all containers used in handling lubricating oil or fuel, clean and ready for use.

b. Cleaning. Use an approved cleaning solvent to clean all surfaces surrounding the point of application before applying the lubricant.

c. Point of Lubrication. Refer to LO 5–3820–236–12 for points of application and proper lubricant. Operate the unit for 5 minutes after lubrication. Inspect the filter element leaks. Stop the unit, wait 5 minutes, and the oil level. Add oil to bring the oil up to the full mark.

d. OES Oil. When using symbol OE in the crankcase, these precautions must served:

(1) The crankcase oil level mus checked frequently, as oil consumption ma crease.

(2) The oil may require changing quently because contamination by dilutio sludge formation will increase under weather operation. See LO 3820–236–12.

f. Oil Filter Assembly Service. Servic oil filters as instructed on figure 3–2.

g. Air Cleaner Service. Service the air er as instructed on figure 3–3.

LUBRICATION ORDER

LO5 3820-236-12

AUGER, EARTH: SKID MOUNTED, GASOLINE DRIVEN (TEXOMA, INC. MODEL 254-10) W/FORD ENGINE MDL. C5PF-6006-F

Reference CYCLE-IL

Intervals are based on normal operations. Adjust to compensate for abnormal operations and severe conditions. During inactive periods sufficient lubrication must be performed for adequate preservation.

A dotted circle indicates a drain below.

Clean fittings before lubricating.

Lubricate points indicated by dotted arrow shafts on both sides of equipment.

Clean parts with SOLVENT, dry-cleaning or with OIL, fuel, Diesel. Dry before lubricating.

Relubricate after washing.

Drain crankcase and gear cases when hot after operation; replenish and check level when cool.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

FOLD

FOLD

Water Pump
Generator Starter.
(Sealed bearings no lubrication required.)

Oil Filter — 100
(Remove, install new filter.)
(See Note 2.)

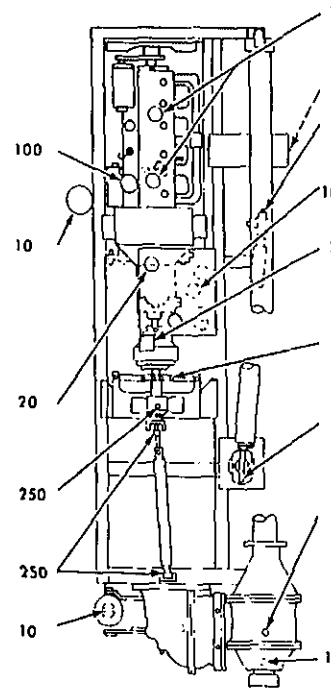
Air Cleaner — OE — 10
(Refill oil reservoir to level mark, every 50 hours disassemble entire unit, clean, re-oil and reassemble.)
(See key.)

Hydraulic Oil Strainer — 20
(For servicing instructions see TM 5-3820-236-15.)

Drive Shaft Support Bearing — GAA — 250
(Sparingly.)

Universal Joint — GAA — 250
(Sparingly.)

Leveling Cylinder Shaft and Clutch Control Shaft — GAA — 10
(3 fittings)



100 — OE — Crankcase Fill and Breathers (Clean breathers.)

10 — GAA — Winch Shaft Bearings

10 — GAA — Elevating Cylinder Upper Ball Joint (Sparingly.)

1000 — Hydraulic Tank Drain Plug (Drain and refill.)

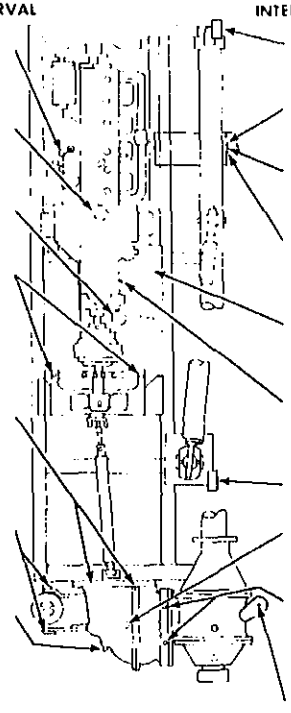
250 — Hydraulic Filter (Remove, clean housing, add new filter unit, reinstall.)

10 — GAA — Drive Clutch Release Bearing (Sparingly.)

10 — GAA — Elevating Cylinder Lower Ball Joint (Sparingly.) (2 fittings)

50 — GQ — Final Drive Fill and Level Plug (Check level.) (Raise elevator to vertical position to check level.) (See key.)

1000 — Final Drive Drain Plug (Drain and refill.)



LUBRICANT	INTERVAL	Left Side
	10	Crankcase Oil Level Gage (Check level.)
	100	Crankcase Oil Drain Plug (Drain and refill.)
	1000	Transmission Drain (Drain and refill.)
GAA	10	Drive Clutch Shaft (Sparingly.)
GAA	10	Right Angle Drive Pinnion Carrier (Sparingly.) (5 fittings)
GAA	10	Leveling Cylinder Support (Sparingly.)
GO	50	Right Angle Drive Fill and Level Plug. (See key.) (Check level.)

INTERVAL	LUBRICANT	Right Side
10	GAA	Upper Mast Sheave
1000		Winch Drain Plug (Drain and refill.)
50		Winch Level Plug (Check level.)
	GO	Winch Fill Plug (See Key.)
50	OE	Hydraulic Tank Fill and level (Check level.) (See Key.)
50	GO	Transmission Fill and Level (Check level.) (See Key.)
10	GAA	Lower Mast Sheave
1000		Right Angle Drive Drain Plug (Drain and refill.)
10	GAA	Final Drive Pinion Carrier (Sparingly.) (4 fittings)
10	GAA	Snatch Block

FOLD

FOLD

— KEY —

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F	+40°F to −10°F	0°F to −65°F	
OE- OIL, Engine, Heavy Duty					
Engine Crankcase	6 qt.	OE 30	OE 10	OES	
Air Cleaner	2/3 qt				
Oil Can Points					
Hydraulic Tank	216 qt	OE 10			
GO- LUBRICATING OIL, Gear					
Right Angle Drive	2 1/2 qt				
Final Drive	3 qt				
Transmission	3 1/2 qt	GO 90	GO 90	GOS	
Winch	1 qt.				
OES- OIL, Engine, Subzero					
GOS- LUBRICATING OIL, Gear					
GAA- GREASE, Automotive and Artillery		All Temperatures			

Intervals given are in hours of normal operation.

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -10°F. Remove lubricants prescribed in the key for temperatures above -10°F. Relubricate with lubricants specified in the key for temperatures below -10°F.

2. OIL FILTER. After installing new filter element, fill crankcase, operate engine 5 minutes, check housings for leaks, check crankcase oil level and bring to full mark.

3. OIL CAN POINTS. Every 50 hours, clean and lightly coat all control linkages and wire rope with OE.

4. LUBRICANTS. The following is a list of lubricants with the Military Symbols and applicable specification numbers.

OE-MIL-L-2105 GO-MIL-L-2105
OES-MIL-L-10295 GOS-MIL-L-10324
GAA-MIL-G-10924

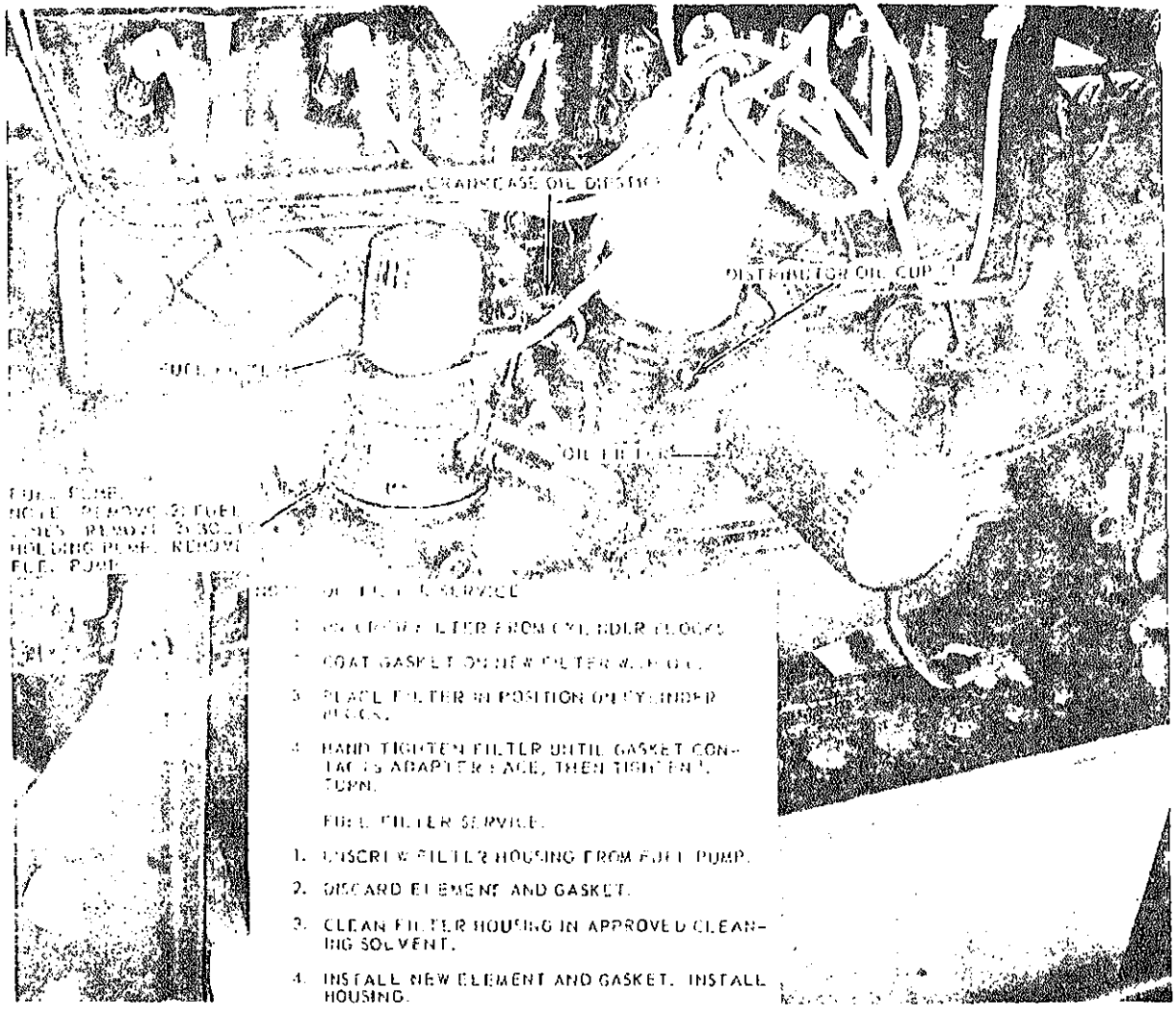
Copy of this Lubrication Order will remain with the equipment at all times; instructions contained herein are mandatory.

BY ORDER OF THE SECRETARY OF THE ARMY:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

OFFICIAL:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.



3820-236-15 3-2

Figure 3-2. Engine service.

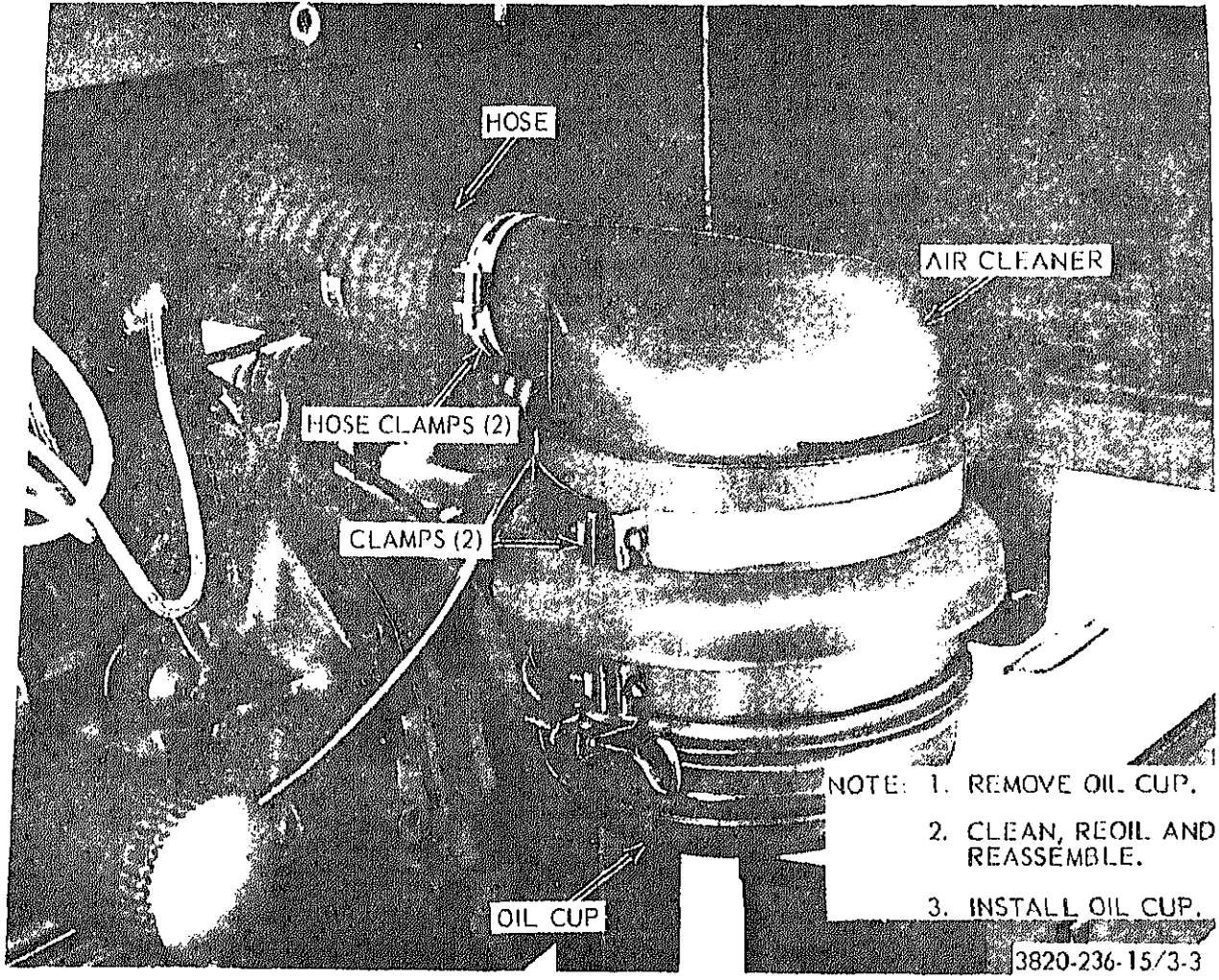


Figure 3-3. Air cleaner service.

3–5. General

To insure that the earth auger is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services to be performed are listed and described in table 3–1. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded together with the corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) at the earliest possible opportunity.

3–6. Daily Preventive Maintenance Services

This paragraph contains a listing of preventiv maintenance services which must be performe by the operator. Refer to table 3–1 for th daily preventive maintenance checks and serv ices.

3–7. Quarterly Preventive Maintenance Services

This paragraph contains a listing of preven tive maintenance services which must be per formed by organizational maintenance person nel at quarterly intervals. A quarterly interva is equal to 3 calendar months, or 250 hour of operation, whichever occurs first. Refer t table 3–1 for the quarterly preventive mair tenance service.

Table 3-1. Preventive Maintenance Checks and Services

Interval					B—Before operation D—During operation	A—After operation W—Weekly	M—Monthly Q—Quarterly
Operator			Org				
Daily			M	Q	Item to be inspected	Procedure	Reference
D	A	W					
					Fuel system	Check level. Clean sediment bowl.	Fig. 3-4
		X			Battery	Check electrolyte level and hand tightness of connections. Fill to 3/8 inch above the plates. In freezing weather run the engine a minimum of one hour after adding water.	Fig. 2-1
					Cooling system	Check coolant level. Fill to 2 inch below filler neck.	
					Engine oil level	Check oil level. Add oil to proper level.	LO 5-3820-236-12
					Fire extinguisher	Check for broken seal. *Inspect for charge or insecure mountings. Weigh fire extinguisher.	Para 2-17
X					Gages and instruments	Check for normal reading: Coolant temperature 160° to 180° F. Engine oil pressure 40 to 60 psi. Ammeter Charge side. Hydraulic oil gage 300-400 psi.	Para 3-51
				X		Lubricate earth auger as specified in current L.O.	LO 5-3820-236-12
				X		Inspect the valve lifter cover and gaskets for oil leaks. If noisy or loss of power is noticed, measure the rocker arm adjustment.	Para 3-23
				X	Compression test of engine	Remove spark plugs and make compression test of engine. If there is more than a 10 lb variance, then trouble is related to faulty cylinder head gasket, piston, piston rings.	
				X	Crankcase and breather cap	Inspect crankcase for leaks. Inspect condition of crankcase breather	